

Application Serial No.: 10/811,863  
Art Unit: 2853***LISTING OF CLAIMS***

The following is a copy of Applicants' claims that identifies language being added with underlining ("\_\_") and language being deleted with strikethrough ("—"), as is applicable:

1. (Currently Amended) A microwave curable ink for piezo electric drop-on-demand inkjet printing, comprising:
  - a. molecules of material in said ink capable of undergoing a polymerization reaction under the influence of microwave radiation;
  - b. a microwave radiation absorber in said ink, said absorber enhances absorption of microwave radiation and conversion of said radiation into heat;
  - c. a thermal initiator in said ink, said initiator being activated by heat generated by said microwave radiation; and
  - d. a colorant in said ink.
2. (Previously Presented) The ink according to claim 1, wherein said molecules are acrylic monomers, acrylic oligomers or any combination thereof.
3. (Previously Presented) The ink according to claim 1, wherein said microwave radiation absorber is at least one of carbon black, minerals and polar molecules.
4. (Previously Presented) The ink according to claim 1, wherein said thermal initiator is at least one of lauroyl peroxide, cumenn peroxide dicumyl peroxide, tert-amyl peroxybenzoate, dentanedione-peroxide, and 1,1'-azobis-cyclohexane carbonitrile.
5. (Previously Presented) The ink according to claim 1 further comprising one or more additives, said additives are wetting agents, dispersants, rheology modifiers, solvents, or defoamers.

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6. (Previously Presented) A method of microwave curing of ink for piezo drop-on-demand ink jet printing comprising:

- a. providing an ink, said ink having a microwave absorber and a thermal initiator, said absorber enhancing absorption of microwave radiation;
- b. printing with said ink an image bearing pattern on a substrate; and
- c. irradiating by microwave radiation said printed image bearing pattern such that said image bearing pattern is cured by heat generated by said microwave radiation.

7. (Previously Presented) A method of printing on an optically reflective substrate by piezo-drop-on-demand ink jet printing comprising:

- a. providing an ink, said ink having a microwave absorber and a thermal initiator, said absorber enhancing absorption of microwave radiation;
- b. printing with said ink an image bearing pattern on said optically reflecting substrate; and
- c. irradiating by microwave radiation said printed image bearing pattern such that said image bearing pattern is cured by heat generated by said microwave radiation and said microwave radiation is not reflected by the substrate.

8. (Currently Amended) An ink jet ink composition comprising:

- a. molecules in said ink capable of undergoing polymerization reaction under microwave radiation;
- b. at least one colorant in said ink; and
- c. one or more additives in said ink.

9. (Previously Presented) The ink according to claim 8, where said molecules are monomers and oligomers containing acrylate groups.

10. (Original) An ink jet ink according to claim 8, where said additives are selected from a group of thermal initiators, microwave radiation absorbers, wetting agents, dispersants, rheology modifiers, solvents, and defoamers.

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11. (Previously Presented) The ink according to claim 8, further comprising thermal initiators, said thermal initiators are lauroyl peroxide, cumenn peroxide dicumyl peroxide, tert-amyl peroxy-benzoate, dentanedione-peroxide, or 1,1'-azobis-cyclohexane carbonitrile.

12. (Currently Amended) The An ink-jet ink according to claim 8, further comprising microwave absorbers, said microwave absorbers are selected from components capable of increasing the absorption of microwave radiation, said components being: carbon black, minerals.

13. (Currently Amended) The ink according to claim 3, wherein said microwave radiation absorber comprises said polar molecules, said polar molecules comprising are alcohols, amines, ammonium salts or conductive polymers.

14. (Currently Amended) The ink according to claim 12 8, further comprising microwave absorbers, said microwave absorbers being selected from components capable of increasing the absorption of microwave radiation, said components being wherein said polar molecules are comprising alcohols, amines, ammonium salts or conductive polymers.

15. (Previously Presented) The method according to claim 7, wherein printing on said optically reflecting substrate comprises printing on a glass surface, a plastic surface or a marble surface.

16. (New) The ink according to claim 1, wherein the ink contains only polymerizable components, which are converted into polymeric coating only after printing and by exposure to microwave radiation.

17. (New) The method according to claim 6, wherein the ink contains only polymerizable components, which are converted into polymeric coating only after printing and by exposure to microwave radiation.

18. (New) The ink according to claim 8, wherein the ink contains only polymerizable components, which are converted into polymeric coating only after printing and by exposure to microwave radiation.